

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

POWER INTEGRATIONS, INC., a :
Delaware corporation, :
 :
Plaintiff, :
 :
v. : C.A. No. 04-1371-JJF
 :
FAIRCHILD SEMICONDUCTOR :
INTERNATIONAL, INC., a Delaware :
corporation, and FAIRCHILD :
SEMICONDUCTOR CORPORATION, a :
Delaware corporation, :
 :
Defendants. :

Frank E. Scherkenbach, Esquire of FISH & RICHARDSON P.C., Boston, Massachusetts.

Howard G. Pollack, Esquire and Michael R. Headley, Esquire of FISH & RICHARDSON P.C., Redwood City, California.

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Attorneys for Plaintiff.

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Attorneys for Defendants.

O P I N I O N

September 24, 2008
Wilmington, Delaware


Farnan, District Judge.

This action was brought by Plaintiff, Power Integrations, Inc. ("Power Integrations"), against Defendants, Fairchild Semiconductor International, Inc. and Fairchild Semiconductor Corporation (collectively, "Fairchild"), alleging infringement of four patents, U.S. Patent No. 6,249,876 (the "'876 patent"); U.S. Patent No. 6,107,851 (the "'851 patent"); U.S. Patent No. 6,229,366 (the "'366 patent"); and U.S. Patent No. 4,811,075 (the "'075 patent"). A trial on infringement was held, and the jury returned a verdict in favor of Power Integrations finding that Fairchild willfully infringed claim 1 of the '876 patent, claims 1 and 4 of the '851 patent, claims 9 and 14 of the '366 patent, and claims 1 and 5 of the '075 patent. A second trial on the issue of invalidity was held before a second, different jury, and the jury returned a verdict in favor of Power Integrations finding that the asserted claims of the patents-in-suit were not invalid.

The issue of inequitable conduct was tried to the Court. This Opinion constitutes the Court's Findings of Fact and Conclusions of Law on whether the patents-in-suit are unenforceable due to inequitable conduct.¹

¹ In the context of briefing the inequitable conduct issue, Power Integrations filed a Motion For Entry Of Judgment Of No Inequitable Conduct Re U.S. Patent No. 6,249,876 (D.I. 573). Because the Court now has the full record of the bench trial before it and completed post-trial briefing on all the patents-

I. Legal Principles Governing Inequitable Conduct

Individuals associated with the filing and prosecution of a patent application, including inventors named in the application, attorneys or agents prosecuting the application, and those involved in the preparation or prosecution of the application who are associated with the inventor, have a duty of candor, good faith and honesty in their dealings with the PTO. 37 C.F.R. § 1.56(a), (c). The duty of candor, good faith and honesty includes the duty to submit truthful information to the PTO, as well as information which is material to the examination of the patent application. Elk Corp. of Dallas v. GAF Bldg. Materials Corp., 168 F.3d 28, 30 (Fed. Cir. 1999).

"Inequitable conduct occurs when a patentee breaches his or her duty to the PTO of 'candor, good faith, and honesty.'" Warner-Lambert Co. v. Teva Pharms. USA, Inc., 418 F.3d 1326, 1342 (Fed. Cir. 2005). A patent procured as a result of inequitable conduct is unenforceable, and if inequitable conduct occurred in relation to one patent claim, the entire patent is rendered unenforceable. Kingsdown Medical Consultants v. Hollister Incorporated, 863 F.2d 867, 877 (Fed. Cir. 1988).

To establish inequitable conduct due to the failure to disclose material information or the submission of false

in-suit, the Court will consider that Motion in the context of rendering its Findings of Fact and Conclusions of Law on inequitable conduct as it pertains to all of the patents-in-suit.

information, the party raising the issue must prove by clear and convincing evidence that (1) the information is material; (2) the knowledge of this information and its materiality is chargeable to the patent applicant; and (3) the applicant's submission of false information or its failure to disclose this information resulted from an intent to mislead the PTO. Warner-Lambert, 418 F.3d at 1342-1343 (citations omitted). "Information is considered material when there is a substantial likelihood that a reasonable examiner would have considered the information important in deciding whether to allow the application to issue as a patent." TAP Pharm. Prods. v. OWL Pharm., L.L.C., 419 F.3d 1346, 1351 (Fed. Cir. 2005). However, a reference that is material need not be disclosed if it is cumulative to or less material than other references that have already been disclosed. Elk Corp., 168 F.3d at 31. A reference is cumulative if it "teaches no more than what a reasonable examiner would consider to be taught by the prior art already before the PTO." Regents of the Univ. of Cal. v. Eli Lilly & Co., 119 F.3d 1559, 1575 (Fed. Cir. 1997).

In addition to materiality, the party seeking to establish inequitable conduct must demonstrate that the patent applicant acted with the intent to deceive the PTO. The intent to deceive the PTO may be established by direct evidence or inferred from the facts and circumstances surrounding the applicant's overall

conduct. Impax Labs. v. Aventis Pharms., 468 F.3d 1366, 1375 (Fed. Cir. 2006); Molins PLC v. Textron, Inc., 48 F.3d 1172, 1180 (Fed. Cir. 1995). In determining whether the applicant's overall conduct evidences an intent to deceive the PTO, the Federal Circuit has emphasized that the challenged "conduct must be sufficient to require a finding of deceitful intent in the light of all the circumstances." Kingsdown Medical Consultants, 863 F.2d at 873.

Once materiality and intent have been established, the court must conduct a balancing test to determine "whether the scales tilt to a conclusion that 'inequitable conduct' occurred." Critikon, Inc. v. Becton Dickinson Vascular Access, Inc., 120 F.3d 1253, 1256 (Fed. Cir. 1997). Generally, the more material the omission, the less the degree of intent that must be shown to reach a conclusion of inequitable conduct. Digital Control Inc. v. Charles Machine Works, 437 F.3d 1309, 1313 (Fed. Cir. 2006) (discussing the balancing of materiality and intent and stating that "a greater showing of one factor allow[s] a lesser showing of the other"); Elk Corp., 168 F.3d at 32.

The question of whether inequitable conduct occurred is equitable in nature. As such, the ultimate question of whether inequitable conduct occurred is committed to the sound discretion of the trial court. Elk Corp., 168 F.3d at 30-31; Kingsdown Medical Consultants, 863 F.2d at 876.

II. Whether The Patents-In-Suit Are Unenforceable As A Result Of Inequitable Conduct

A. The '075 Patent

Fairchild contends that the '075 patent is unenforceable as a result of inequitable conduct because neither the inventor, Klas Eklund, nor his attorney cited any prior art to the Patent Office, even though Dr. Eklund conducted a prior art search which disclosed the "p-top" and "extended drain" features of the patent. Fairchild contends that at least twelve of the references uncovered by Dr. Eklund are material, because Dr. Eklund emphasized the "p-top" and "extended drain" features of the '075 patent during its prosecution in order to overcome the Examiner's rejections, and Power Integrations and Dr. Eklund have continued to emphasize these features as key inventive features of the '075 patent. Of these twelve references, Fairchild specifically directs the Court to two references: (1) Ludikhuize, High Voltage DMOS and PMOS in Analog IC's, IEEE (1982) (the "Ludikhuize reference"), which Fairchild contends discloses a surface adjoining p-top layer, on top, as disclosed in the '075 patent, and an extended drain structure beneath the p-top, and (2) Wakaumi, A Highly Reliable 16 Output High Voltage NMOS/CMOS Logic, IEDM (1983) (the "Wakaumi reference"), which Fairchild contends discloses an extended drain integrated on the same chip as CMOS logic.

Fairchild points out that Dr. Eklund studied the twelve references he located and wrote about them in a memo dated October 14, 1984, entitled "High Voltage MOS Integrated Circuits, A Technology And Application Overview." Dr. Eklund then shared this memo with five to ten people at AMD. Fairchild further contends that during the prosecution of the '075 patent, Dr. Eklund provided his attorney with some of his inventive notes, but not others, in order to hide the relevant prior art. Given his experience as an engineer and his study of these references, Fairchild contends that Dr. Eklund understood the materiality of the references, but failed to disclose them to the PTO in order to obtain the '075 patent, which he transferred to Power Integrations in exchange for \$5 million worth of stock.

Power Integrations does not dispute that Dr. Eklund knew about and had copies of the prior art upon which Fairchild bases its inequitable conduct argument. However, Fairchild contends that Dr. Eklund disclosed the relevant teachings of the prior art in the Background Section of the '075 patent by way of a summary. Power Integrations also contends that these teachings were not material, because they were conventional process technologies well-known in the art and would not have changed the Examiner's evaluation of the '075 patent. To support its position, Power Integrations directs the Court to the testimony of Fairchild's expert witness, Peter Gwozdz, whom Power Integrations contends

acknowledged that this prior art was sufficiently disclosed in the Background Section of the '075 patent. Power Integrations also points out that Fairchild's Mr. Beasom failed to disclose the same art in his related patent application, which Power Integrations contends is a further demonstration of the immateriality of the prior art raised by Fairchild. In addition, Power Integrations contends that Fairchild has failed to demonstrate that Dr. Eklund intended to deceive the PTO.

It is undisputed that Dr. Eklund knew about and did not provide any prior art references to the PTO during the prosecution of the '075 patent, including the Ludikhuize reference and the Wakaumi reference. Accordingly, the questions remaining for the Court are whether the prior art references identified by Fairchild are material, and whether Dr. Eklund withheld them from the PTO with the intent to deceive the PTO.

Deciding whether an applicant engaged in equitable conduct is certainly a matter about which reasonable jurists and/or attorneys could disagree. After considering all the evidence presented in this case, and weighing that evidence in an equity context, the Court is not convinced that the requisite intent to deceive has been established by clear and convincing evidence. In this regard, the Court is persuaded that Dr. Eklund believed sufficient disclosure to the PTO had been achieved through the summary he provided of the prior art in the Background of the

Invention. That Dr. Eklund maintained the prior art references in his possession and readily shared them with others at his employment points away from any attempt on his part to bury or hide the references and further demonstrates to the Court his belief that the references were immaterial, conventional in the state of the art at the time, and in any event, already adequately disclosed to the PTO by way of his summary. This having been said, however, the Court is troubled by the fact that Dr. Eklund possessed known material prior art references but did not disclose the actual references themselves. However, absent a bright line rule by the Federal Circuit that non-disclosure of possessed, material art equates with inequitable conduct, the Court is unwilling to strike a patent in the circumstances of a plausible explanation for that non-disclosure. In this case, that explanation is the summary provided by Dr. Eklund, which he believed adequately took into account the prior art.

Accordingly, the Court concludes that Fairchild has failed to establish by clear and convincing evidence that the '075 patent was procured as a result of inequitable conduct.

B. The '851 Patent

With regard to the '851 patent, Fairchild contends that the named inventors of the patent committed inequitable conduct by deliberately withholding from the Patent Examiner pertinent prior

art and affirmatively misrepresenting the withheld art.² Specifically, Fairchild contends that the inventors misrepresented Figure 1 of the '851 patent by erroneously arguing to the Examiner that it did not disclose, suggest or teach the oscillator element that was included in allowed claim 1, and added to amended claim 29 in order to overcome the objection of the Examiner. Fairchild also contends that the inventors failed to disclose the Power Integrations SMP211 device and its datasheet and schematics, which are relevant prior art disclosing the oscillator element that the Examiner believed was missing from the prior art. According to Fairchild, if the prior art SMP211 is used in the prior art circuit shown in Figure 1 of the '851 patent it would disclose or suggest a PWM switch comprising an oscillator for generating a maximum duty cycle signal and a signal with a frequency range dependent on a frequency variation circuit as recited in claim 1 of the '851 patent. Thus, Fairchild maintains that information about the SMP211 contradicts the Examiner's reasons and Power Integrations' arguments for distinguishing the claims of the '851 patent over the prior art in Figure 1.

² The named inventors of the '851 patent are Balu Balakrishnan, Alex Djenguerian and Leif Lund. However, Fairchild's argument regarding intent to deceive the PTO focuses on Mr. Balakrishnan's conduct, and therefore, the Court will limit its focus to the knowledge and intent of Mr. Balakrishnan.

In addition to the SMP211, Fairchild also contends that Power Integrations withheld SMP3, SMP240 and SMP260, devices which also contained the oscillator element. According to Fairchild, these devices also disclose an internal soft-start, which is relevant prior art to the '851 patent, and therefore, the withholding of these additional references provides an additional basis for a finding of inequitable conduct.

In response, Power Integrations contends that Fairchild's argument is based on a mistaken interpretation of the Examiner's reasoning in allowing claim 1. Specifically, the Patent Examiner allowed claim 1 reasoning that "[t]he prior Art of record does not appear to disclose or suggest a PWM switch comprising an oscillator for generating a maximum duty cycle signal and a signal with a frequency range dependent on a frequency variation circuit as recited in claim 1." (D.I. 588, DX-106 at FCS0000440.) Power Integrations contends that Fairchild's argument is based on the misinterpretation that this statement provides for two separate and distinct limitations: an "oscillator for generating a maximum duty cycle signal," and "a signal with a frequency range dependent on a frequency variation circuit." (D.I. 603 at 10). Power Integrations contends that an "oscillator for generating a maximum duty cycle" was well known in the art and disclosed in at least three prior art references that the Examiner had before him; however "an oscillator that

both generated a maximum duty signal **and** a second signal, and did so 'with a frequency range dependent on a frequency variation circuit' was novel and not obvious." (Id., emphasis in original). Stated another way, Power Integrations' argument is that the Examiner allowed the claims because "*the combination of features of a single oscillator generating multiple signals whose frequency varied in a range based on a frequency variation signal, together with the other recited elements . . . was novel and non-obvious.*" (Id. at 13, emphasis in original.)

Power Integrations further contends that the SMP211 is not material prior art because it does not pertain to frequency jittering, the crux of the '851 patent. In addition, Power Integrations argues that the SMP211 is a conventional pulse width modulation controller chip, which was well known in the art, and therefore, its disclosure to the PTO would have been cumulative. Because Power Integrations disclosed prior art referencing oscillators with maximum duty cycle signals and because Mr. Balakrishnan believed his statements to the Examiner were true, Power Integrations contends that Fairchild cannot demonstrate that the '851 patent was procured through inequitable conduct.

Reviewing the evidence adduced at trial concerning the prosecution of the '851 patent and the prior art cited by Fairchild, the Court concludes that Fairchild has not established by clear and convincing evidence that the '851 patent was

procured through inequitable conduct. In reaching this conclusion, the Court is persuaded by Power Integrations' argument that the Examiner's reason for allowing claim 1 should not be read so as to require two separate limitations, despite Power Integrations use of the plural word "limitations," in responding to the Examiner's comments. This interpretation of the Examiner's comments makes sense in light of both the precise wording of the Examiner's statements, as well as the prior art that was before the Examiner. Notably, the Examiner did not refer to two oscillators -- an oscillator for generating a maximum duty cycle signal, and an oscillator that provides an oscillation signal having a frequency range that is varied according to a frequency variation signal. Rather, the Examiner referenced a single oscillator with a combination of features -- **"an oscillator** for generating a maximum duty cycle signal **and** a signal with a frequency range dependent on a frequency variation circuit." (D.I. 588, DX-106 at FCS0000440, emphasis added). Moreover, the prior art before the Examiner already disclosed oscillators that generated multiple signals, including maximum duty cycle signals. (PX-394 ('381 patent); PX-395 ('303 patent) and Admitted Exhs. Vol. 1, PX-19 (Pelly article)). Power Integrations submitted this prior art, and in light of that disclosure, the Court is not persuaded that Power Integrations was claiming that an oscillator with a maximum duty cycle signal

was a separate per se novel limitation. Rather, the Court is persuaded that Power Integrations' argument before the Examiner in referring to "limitations" in the plural was that the prior art did not possess a combination of features or limitations in a single oscillator, those multiple features or limitations being a single oscillator that provided both a maximum duty cycle and an oscillation signal where the frequency range of the oscillator, and its output signals, is varied according to a frequency variation signal.

Having concluded that the Examiner did not intend to refer to two separate and distinct limitations, the Court concludes that Fairchild has not established by clear and convincing evidence that Power Integrations misled the Examiner or made affirmative misstatements of fact to the Examiner. The Court further concludes that Fairchild has not established by clear and convincing evidence inequitable conduct based on the withholding of the SMP211. To the extent that the SMP211 discloses a maximum duty cycle signal, the Court has already noted that three prior art references disclosing such a signal were disclosed by Power Integrations to the PTO. (Hearing Tr. 9/24/07 at 165:11-168:22). Further, Fairchild's own expert, Dr. Horowitz explained that the SMP211 is a conventional pulse width modulation controller chip, the function of which was well known in the prior art. (Trial Tr. 9/19/07 at 737:15-738:9, 738:15-24, 810:14-18). In light of

these disclosed references and the well-known nature of the workings of devices like the SMP211 in the art, the Court is persuaded that the disclosure of the SMP211 would have been cumulative to the art already before the Patent Examiner.³

In addition, the Court concludes that Fairchild has failed to demonstrate by clear and convincing evidence any intent by the inventors of the '851 patent to deceive the PTO. In fact, the inventors labeled the conventional pulse width modulation controller chip in the Prior Art Figure 1 as the SMP211, and thus, disclosed this device to Examiner. Mr. Balakrishnan further believed that information regarding the SMP211 was publicly available when the '851 patent was being prosecuted, and therefore, the Examiner would have been able to find additional detail about the SMP211 if he found it necessary. (Trial Tr. 9/19/07 at 882:20-883:5). In addition, Mr. Balakrishnan believed that oscillators with maximum duty cycle signals were so well known in the art that he did not believe it was necessary to

³ Fairchild contends that the fact that the PTO granted reexamination of the '851 patent based on the SMP211 establishes that the reference was material for purposes of inequitable conduct. The Federal Circuit has not endorsed this approach. See, e.g., Lummus Industries, Inc. v. D.M. & E. Corp., 862 F.2d 267, 273 (Fed. Cir. 1988) (holding that even a rejection of claims after reexamination does not establish per se high materiality for purposes of inequitable conduct); Ethicon v. Quigg, 849 F.2d 1422, 1427 (Fed. Cir. 1988) (recognizing that reexamination proceedings before the PTO employ a preponderance of the evidence standard and not proof by clear and convincing evidence).

explain them to the Examiner. (Balakrishnan Depo. Tr. 3/15/06 at 843:24-844:17). In light of Mr. Balakrishnan's testimony, which the Court finds credible, the Court concludes that Fairchild has failed to establish the requisite intent to deceive the PTO. Accordingly, the Court concludes that Fairchild has failed to demonstrate by clear and convincing evidence that the '851 patent was procured as a result of inequitable conduct through the nondisclosure of the SMP211. As for Fairchild's arguments regarding the soft-start allegedly disclosed in the SMP240, SMP211 and SMP3 devices, the Court will consider those arguments in detail in the context of the '366 patent below.

C. The '366 Patent

The '366 patent is related to the '851 patent, and therefore, Fairchild's argument that the '851 patent was procured through inequitable conduct also applies to the '366 patent. Specifically, Fairchild contends that claims 1-8 and 10-11 of the '366 patent require "an oscillator that provides a maximum duty cycle signal," the same element that was at issue in the '851 patent. Fairchild also contends that Power Integrations intended to deceive the PTO regarding material prior art concerning the soft-start circuits. In this regard, Fairchild contends that Power Integrations failed to disclose the SMP3, SMP240 and SMP260 devices and datasheets, while burying the Examiner in 75 references that Power Integrations knew were irrelevant.

In response, Power Integrations contends that Fairchild's argument concerning the soft-start circuit is premised on a claim construction argument rejected by the Court in this case. In this regard, Power Integrations contends that a reasonable patent examiner would have applied the same construction adopted by the Court, because as this Court noted during claim construction, a broader construction would have read directly on the well-known prior art methods of performing soft-start. Power Integrations contends that it disclosed these prior art methods to the PTO in references like Figure 1 of the patent itself and Pelly.

With respect to the SMP3 reference specifically, Power Integrations contends that the reference is not material prior art because it does not have even a conventional soft-start, let alone a structure remotely related to the structure claimed in the '366 patent. Power Integrations further contends that with regard to the SMP240/260 devices, Fairchild's argument is based on a distortion and mischaracterization of the testimony of Mr. Lund, and in any event, that SMP240/260 devices do not contain any structures which would be substantially similar to the structures of the '366 patent. Thus, Power Integrations contends that these devices are not material prior art. Power Integrations also contends that neither Mr. Lund, nor Mr. Balakrishnan had the requisite intent to deceive the PTO because neither of them recognized, at the relevant time, that the

SMP240/260 contained internal soft-start features and both agreed that had they known the SMP240/260 had internal soft-start, they would have disclosed them.

Because the Court has previously concluded that Fairchild has not established inequitable conduct in the procuring of the '851 patent based on the element concerning "an oscillator that provides a maximum duty cycle signal," the Court will focus its discussion of the '366 patent on soft-start circuits and the prior art identified by Fairchild as the basis for its inequitable conduct claim, the SMP3, SMP240 and SMP260. The Court's discussion of the soft-start issue applies in equal force, however, to the '851 patent, which Power Integrations recognizes contains a soft-start feature.

1. SMP240/260

Based on the evidence and testimony adduced at trial, the Court concludes that Fairchild has not established by clear and convincing evidence that the '366 patent was procured through inequitable conduct based on the nondisclosure of the SMP240/260. Soft-start functionality in general was known in the prior art and disclosed by Power Integrations in Figure 1 of the '366 patent and the Pelly article. Both of these references were sufficient to describe conventional soft-start functionality, and therefore, the disclosure of similar references disclosing conventional soft-start like the SMP240/260 would have been

cumulative to that which was already disclosed to the PTO by the inventors. (Trial Tr. 9/20/07 at 1048:9-1050:18, 1054:6-1057:21).

Further, the evidence indicates that the SMP240/260 had none of the structures corresponding to the '366 soft-start circuit. (Trial Tr. 9/19/07 at 845:10-14, 846:9-22, 902:22-903:22; Trial Tr. 9/20/07 at 1055:14-1056:16). Fairchild contends that this argument is irrelevant to materiality before the PTO, because it improperly relies upon a hindsight application of the Court's claim construction. The Court, however, disagrees. As the Court recognized in its claim construction, soft-start functionality was generally well known in the prior art and already disclosed to the PTO. Thus, in the Court's view, a reasonable patent examiner would consider prior art material to the '366 patent to be art that shows structures substantially similar to those disclosed in the '366 patent.⁴ Specifically, the '366 patent used the AND gate, latch and multiple soft-start comparators. However, as Power Integrations expert, Dr. Blauschild testified, and Fairchild's expert, Dr. Horowitz, acknowledged, the SMP260

⁴ Fairchild implies that the Court's claim construction is not the "broadest reasonable construction" for purposes of determining what prior art to disclose. 37 C.F.R. § 1.56. However, as the Court alluded to in its claim construction, a broader reading would have read onto conventional prior art methods of performing soft-start. For purposes of inequitable conduct, these conventional prior art methods were already disclosed, and therefore, the further disclosure of the SMP240/260 would have been cumulative.

did not contain the AND gate and latch structures and disclosed only a single comparator rather than multiple comparators.

(Trial Tr. 9/19/07 at 845:10-14, 846:9-20; Trial Tr. 9/20/07 at 1055:14-1056:16). This testimony was also confirmed by Mr. Balakrishnan, who explained that the SMP240/260 did not have any of the structures associated with the soft-start in the '366 patent and that the absence of these features in the SMP240/260 demonstrated that the SMP240/260 performed conventional soft-start. (Trial Tr. 9/19/07 at 902:22-903:22).

Fairchild relies on the deposition testimony of Mr. Lund to argue that the SMP240/260 devices were highly material prior art because they contain every element of the '366 patent. In full and in context, however, Mr. Lund's testimony is not as dispositive as Fairchild suggests. For example, Fairchild ignores clarifications Mr. Lund made subsequently in his deposition in which he unequivocally stated that there are no maximum duty cycle signals generated as a maximum duty signal in the SMP240/260. (D.I. 591, Lund Depo. Tr. 8/15/05 at 40:7-22). Further, there the record of the deposition suggests that Fairchild's counsel did not define for Mr. Lund the terms he was discussing and did not indicate to Mr. Lund whether he was drawing a comparison between the claim language of the '366 patent or conventional soft-start. As discussed, the SMP240/260 have conventional soft-start, so this ambiguity in the

questioning of Mr. Lund is critical. Further, Fairchild fails to point out that Mr. Lund ultimately testified that the soft-start in the SMP240/260 was unrelated to the technology of the '366 patent. (Id. at 80:5-9).

Moreover, the Court concludes that Fairchild has failed to establish that the inventors of the '366 patent intended to deceive the PTO by failing to disclose the SMP240/260. Fairchild contends that Mr. Lund knew that the SMP240/260 contained every element of the '366 patent but chose not to disclose the devices. However, Mr. Lund's deposition testimony suggests otherwise. Further, Mr. Lund believed that the SMP240/260 was unrelated to the '366 patent, and in any event, he did not recall the SMP240/260 during the prosecution of the '366 patent, because the SMP240/260 had been "a dead duck" that "never took off and it was forgotten about." (Id. at 66:17-67:3).

In sum, the Court concludes that Fairchild has failed to establish by clear and convincing evidence that the SMP240/260 was material and not cumulative to that which was disclosed before the Patent Examiner, or that the inventors intended to deceive the PTO by failing to disclose these devices. Accordingly, the Court concludes that Fairchild cannot establish inequitable conduct of the '366 patent based upon the nondisclosure of the SMP240 and SMP260. Because the Court concludes that inequitable conduct has not been established on

the soft-start issue, the Court likewise concludes that Fairchild has not established the unenforceability of the '851 patent based on a failure to disclose the SMP240/260 references relative to the soft-start feature.

2. SMP3

With regard to the SMP3 device, the Court likewise concludes that Fairchild has failed to meet its burden of establishing materiality and intent to deceive. Fairchild contends that the SMP3 device contains soft-start circuitry. In the Court's view, however, Fairchild's reliance on a third party's article describing the device to support this proposition is insufficient to overcome the testimony of the inventors, which the Court credits, that the SMP3 did not contain soft-start. (Balakrishnan Depo. Tr. 11/23/05 at 550:4-7, 552:19-557:16, 558:20-559:7, 586:21-605:10; D.I. 591 Djenguerian Depo. Tr. 8/23/05 at 100:12-104:18). Notably, Fairchild has produced no evidence demonstrating that the author of this article had access to the device itself, the details of its circuitry, or the expertise to determine if it actually performed a soft-start function. Indeed, Mr. Balakrishnan reviewed the article and concluded that the author was simply mistaken in his conclusions because the SMP3 does not include soft-start.

In this regard, the Court further credits the testimony of Power Integrations' expert, Dr. Blauschild, that the SMP3 did not

perform even a conventional soft-start and instead had a delay circuit. (D.I. 604, Ex. A (Blauschild Rebuttal Report) at ¶ 62). Indeed, even Fairchild's own expert, Dr. Horowitz, who opined contrary to Mr. Blauschild that the SMP3 had some soft-start functionality⁵, conceded that the SMP3 device would not perform an effective soft-start function, and that the only way to achieve such a result would be to physically modify the SMP3 chip. (Hearing Tr. 9/24/07 at 175:8-176:19). Dr. Horowitz further recognized that the SMP3 datasheets did not say anything about soft-start. (Hearing Tr. 9/24/07 at 176:20-177:7). The absence of soft-start from the datasheets is, in the Court's view, telling as to the actual functionality of the SMP3 and Mr. Balakrishnan's beliefs regarding its functionality.⁶

⁵ Even if the Court were to accept the proposition offered by Fairchild that the SMP3 disclosed some soft-start functionality, the Court would conclude that the reference is not material and cumulative to that which was already disclosed before the PTO. Specifically, Fairchild's expert, Dr. Horowitz, explained in opining that the SMP3 had some soft-start functionality that it worked by limiting the feedback error amplifier. (Hearing Tr. 9/24/07 177:8-15). As Mr. Blauschild recognized, this is the equivalent of conventional soft-start already disclosed to the PTO, and this method of operation does not include the manner in which the '366 patent's soft-start operates. (D.I. 604, Ex. A (Blauschild Rebuttal Report, at ¶ 65).

⁶ This testimony, in turn, is relevant to the question of whether, even if materiality is established, the inventors had the requisite intent to deceive the PTO by failing to disclose the SMP3. Neither Mr. Balakrishnan nor Mr. Djenguerian believed that the SMP3 contained soft-start functionality, and Mr. Lund was not aware of the SMP3 at all. Because the inventors either did not know about the SMP3 or did not believe the SMP3 disclosed

(Balakrishnan Depo. Tr. 11/23/05 at 557:1-559:7). As Mr. Balakrishnan recognized, given the importance of soft-start to the market place it would have been disclosed in the datasheets if the inventors believed the SMP3 functioned using soft-start. (Balakrishnan Depo. Tr. 11/23/05 at 557:1-559:7). Because Fairchild has failed to establish that the SMP3 contains a soft-start feature, the Court concludes that it is not material prior art to the '366 patent. Accordingly, the Court concludes that Fairchild cannot establish inequitable conduct based upon the nondisclosure of the SMP3.

D. The '876 Patent

With respect to the '876 patent, Fairchild contends that the patent's inventors withheld from the PTO their earlier, publicly disclosed invention, the '851 patent. Fairchild contends that the '851 patent is properly considered prior art because it was conceived in August 1997 and publicly disclosed in March 1998. On May 18, 1998, three days before the alleged invention of the '876 patent, the application leading to the '851 patent was filed. Fairchild also contends that the inventors of the '876 patent recognized the '851 patent as prior art when they signed the '876 Invention Disclosure form by initially incorporating

soft-start, a belief confirmed by the absence of soft-start on the datasheet, the Court concludes that Fairchild cannot establish that the inventors of the '366 patent intended to deceive the PTO by withholding the SMP3.

into that form Figure 1 from the '851 patent and describing that figure as "prior art." Fairchild contends that less than two months after signing the '876 Invention Disclosure Form, Power Integrations filed the application leading to the '876 patent, but deliberately omitted from Figure 1 the "Prior Art" label. Fairchild contends that Power Integrations then described Figure 1 as part of the '876 invention, instead of acknowledging its status as prior art in a deliberate effort to mislead and deceive the PTO.

In response, Power Integrations contends that the '851 patent is not prior art to the '876 patent because the expected March 1998 disclosure never occurred. Rather, Power Integrations contends that the March 1998 date reflects only an "expected date of first public disclosure" or an inventors' estimate, and that the actual public disclosure of the '851 patent did not occur until February 1999. Power Integrations also contends that its inventors' alleged admission that the '851 was prior art does not take into account the actual disclosure dates and is, in any event, insufficient to meet Fairchild's burden of demonstrating that the '851 patent satisfies the legal definition of anticipatory prior art provided in 35 U.S.C. § 102(a).

A person is not entitled to a patent if "the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the

invention thereof by the applicant for patent." 35 U.S.C. § 102(a). Whether a reference is prior art is a legal question. Panduit Corp. v. Dennison Mfg. Co., 810 F.2d 1561, 1568, 1 USPQ 1593 (Fed. Cir. 1987).

Based on the testimony and evidence adduced at trial, the Court concludes that Fairchild has not demonstrated that the '851 patent is prior art to the '876 patent. The September 2, 1997 disclosure of the '851 patent was to employees of Power Integrations, and does not constitute a public disclosure. (D.I. 590, PX 326 at 63314 (listing September 2, 1997 as "DATE OF DISCLOSURE TO OTHERS IN THE COMPANY")). Indeed, Fairchild appears to have abandoned its initial argument that the '851 patent was publicly disclosed in September 1997, and instead contends that the '851 patent was first disclosed to the public in March 1998. In support of its argument, Fairchild directs the Court to the '851 Invention Disclosure form signed by Mr. Balakrishnan, Mr. Djenguerian and Mr. Lund in which the "EXPECTED DATE OF FIRST PUBLIC DISCLOSURE (EX. ARTICLE, PRESENTATION AT CUSTOMER ETC.)" is listed as March 1998. However, the form clearly indicates that this is an "expected date," and not an actual date of disclosure, and no evidence has been presented showing that the expected March 1998 disclosure occurred. In fact, the Court finds that the uncontradicted testimony of Mr. Balakrishnan establishes that the '851 patent was not publicly

disclosed prior to the completion of the invention disclosure form for the '876 patent in August 1998. Indeed, Mr. Balakrishnan further testified that the first products embodying the '851 patent were not disclosed to the public until February 1999, and the expected date of disclosure listed in the '851 Invention Disclosure form was only an estimate. Specifically, Mr. Balakrishnan explained:

[That] date is an expected date that the inventor or inventors enter as an earliest possible date that would be disclosed, just to give an indication to the attorney on the urgency of the patent.

It doesn't necessarily mean that it was disclosed at that date.

When we have multiple patents going on, [the attorneys] would like to know which one is, needs to be done first so this gives them a rough approximation of when, how urgent it is to file this patent.

(D.I. 575, Ex. 4, Balakrishnan Depo. Tr. 11/18/05 at 411:14-23).

Fairchild also requests the Court to read the fact that Mr. Lund signed the form on April 2, 1998, as an indication that the expected March 1998 public release occurred. Fairchild contends that a contrary approach, which would accept the testimony of Mr. Balakrishnan, means that "Mr. Lund would have had to have deliberately lied on Power Integrations' invention disclosure form." (D.I. 626 at 19). The Court does not read Mr. Lund's signature on the form to be an express contradiction of Mr. Balakrishnan's testimony and is not persuaded that any negative inference regarding Mr. Lund's credibility should be drawn with

respect to this issue. The form suggests only an "expected date" for public release, and there is no evidence supporting Fairchild's argument that the '851 patent was publicly disclosed prior to the invention date of the '876 patent. Because Fairchild has failed to establish that the '851 patent was prior art to the '876 patent, Fairchild cannot establish that the '876 patent is unenforceable as a result of inequitable conduct based upon a failure to disclose the '851 patent.⁷

IV. CONCLUSION

For the reason discussed, the Court concludes that Fairchild has not established by clear and convincing evidence that the '075 patent, the '876 patent, the '366 patent or the '851 patent were procured through inequitable conduct. Because there are several substantive matters to be resolved in this case, including post-trial motions regarding infringement and invalidity, the Court will delay its request for a Final Judgment Order until those matters have been resolved.

An appropriate Order will be entered.

⁷ In light of this conclusion, the Court will also grant Power Integrations' Motion For Entry Of Judgment Of No Inequitable Conduct Re U.S. Patent No, 6,249,876, which requests the Court to enter judgment in favor of Power Integrations on the this issue.